U.S. ARMY CORPS OF ENGINEERS
NORTHWESTERN DIVISION

RECORD OF CONSULTATION AND STATEMENT OF DECISION

Concerning the
Final Updated Proposed Action for the FCRPS Biological Opinion Remand

and

NOAA's National Marine Fisheries Service November 30, 2004 Biological Opinion
Consultation on Remand for Operation of the Columbia River Power System and 19 U.S. Bureau of Reclamation Projects in the Columbia Basin

January 2005

INTRODUCTION

This Record of Consultation and Statement of Decision (2004 ROCASOD) provides the basis for the U.S. Army Corps of Engineers' (Corps) decision to implement actions identified in the Federal Action Agencies' Updated Proposed Action and considered in the NOAA Fisheries Biological Opinion, *Consultation on Remand for Operation of the Columbia River Power System and 19 Bureau of Reclamation Projects in the Columbia Basin* (Revised pursuant to court order, *NWF v. NMFS*, Civ. No. 01-640-RE (D. Oregon)) (2004 BiOp), dated November 30, 2004.

The Corps, Bonneville Power Administration (BPA), and the U.S. Bureau of Reclamation (Reclamation) (collectively the Action Agencies), entered into Endangered Species Act (ESA) Section 7 consultation with National Marine Fisheries Service (hereinafter referred to NOAA Fisheries) and the U.S. Fish and Wildlife Service (USFWS) on the effects of the operation of projects referred to as the Federal Columbia River Power System (FCRPS) in 1999. The FCRPS projects subject to this consultation include fourteen Federal projects on the Columbia River and its major tributaries, including the Snake, Clearwater, Pend Oreille, Flathead, and Kootenai rivers. The Corps and Reclamation are authorized by Congress to operate these projects for multiple uses including flood control, navigation, hydropower generation, water supply, water quality, fish and wildlife, irrigation, and recreation. BPA markets and transmits the power produced at these projects. The Corps adopted the NOAA Fisheries Biological Opinion on the *Reinitiation of Consultation on Operation of the Federal Columbia River Power System, Including the Juvenile Fish Transportation Program, and 19 Bureau of Reclamation (Reclamation) Projects in the Columbia Basin* (NOAA Fisheries 2000 BiOp) issued on December 21, 2000; and, the USFWS Biological Opinion on the *Effects to Listed Species from Operations of the Federal Columbia River Power System* (USFWS 2000 BiOp) issued on December 20, 2000, in the Record of Consultation and Statement of Decision (2001 ROCASOD) dated May 15, 2001.

NOAA Fisheries 2000 BiOp was challenged in *National Wildlife Federation v. NMFS*, Civ. No. 01-640-RE (D. Oregon). On May 7, 2003, the District Court found the biological opinion invalid and remanded it to NOAA Fisheries on June 2, 2003 to consider revisions consistent with the court's opinion of May 7, 2003. The court also decided that the NOAA Fisheries' 2000 BiOp should remain in effect during the remand.

The Action Agencies were implementing the measures contained in the NOAA Fisheries 2000 BiOp and it was decided that it would be appropriate for NOAA Fisheries to base the 2004 BiOp on a proposed action reflecting the Action Agencies current and planned future operations, rather than to reanalyze the proposed action set forth in the 1999 Biological Assessment. Accordingly, during the consultation process, the Action Agencies developed an Updated Proposed Action (UPA), which was finalized and transmitted to NOAA Fisheries on November 24, 2004. The Corps' actions in the UPA include 1) certain operations, maintenance and structural modifications at Dworshak, Lower Granite, Little Goose, Lower Monumental, Ice Harbor, Libby, Albeni Falls, Chief Joseph, McNary, John Day, The Dalles and Bonneville projects; 2) the juvenile fish transportation program; 3) avian predation reduction and monitoring actions; and 4) estuary habitat

restoration and protection actions. As in the 2000 BiOp, this UPA includes adaptive management processes to assess and report progress and implementation planning.

The Corps participated with NOAA Fisheries and the other Action Agencies in soliciting input from Tribes, states and other regional interests on the UPA and NOAA Fisheries analysis. This included attending several meetings with state and tribal representatives and reviewing comments on the draft UPA and draft 2004 BiOp. This ROCASOD documents the Corps' intent to implement the actions in the UPA and analyzed in the NOAA Fisheries 2004 BiOp.

This ROCASOD discusses how the Corps intends to meet the responsibility to operate and maintain the Corps' FCRPS projects for congressionally authorized purposes consistent with our responsibility under the ESA. This ROCASOD discusses the listed species and designated critical habitat affected by the Corps' actions, the process and analyses used in the consultation, a summary of the action, and other considerations taken into account in making the decision to implement the UPA.

BACKGROUND

Congress authorized the Corps to construct, operate and maintain dam and reservoir projects in the Columbia Basin in accordance with specific legislation (see Appendix A). Pursuant to the authorizing statutes, the Corps operates its FCRPS projects to provide for the multiple uses substantially in accordance with the applicable House Documents incorporating the respective Report of the Chief of Engineers. The Chief's Reports outline recommendations and general plans for projects. Traditionally, the Corps has been granted broad discretion by Congress in planning, constructing, and operating federal water resource projects. This discretionary authority is based on congressional reliance on Corps' experience and technical expertise. However, this discretion is not unconstrained; the authorizing legislation mandates the Corps provide for specified project uses. The Corps is responsible for using its expertise in making decisions on how to operate and maintain the FCRPS projects for multiple uses based on principles of operating experience, public concerns, water supply, public health and safety, funding, international agreements and the needs of the Pacific Northwest and the Nation. The Corps operates the FCRPS projects addressed in this 2004 ROCASOD for multiple purposes, including flood control, hydropower generation, irrigation, navigation, fish, wildlife, water quality, municipal and industrial water, and recreation.

Consistent with the congressionally authorized uses, the Corps has consulted with NOAA Fisheries and the USFWS on the FCRPS operations and structural modifications in response to the listings of several salmonid and other fish species in the basin, and the designation of critical habitat since 1991. This 2004 ROCASOD addresses the 12 listed and one proposed anadromous ESUs (hereinafter referred to as the 13 ESUs) under NOAA jurisdiction, and the designated critical habitat for 3 ESUs. The 13 species are:

- Snake River (SR) spring/summer Chinook salmon (*Oncorhynchus tshawytscha*)
- Snake River (SR) fall Chinook salmon (*O. tshawytscha*)
- Upper Columbia River (UCR) spring Chinook salmon (*O. tshawytscha*)
- Upper Willamette River (UWR) Chinook salmon (*O. tshawytscha*)

- Lower Columbia River (LCR) Chinook salmon (*O. tshawytscha*)
- Upper Columbia River (UCR) steelhead (*O. mykiss)*
- Middle Columbia River (MCR) steelhead (*O. mykiss)*
- Upper Willamette River (UWR) steelhead (*O. mykiss)*
- Lower Columbia River (LCR) steelhead (*O. mykiss)*
- Columbia River (CR) chum salmon (*O. keta*)
- Snake River (SR) sockeye salmon (*O. nerka*)
- Lower Columbia River coho salmon (*O. kisutch*)

Currently, there are critical habitat designations for the following 3 ESUs: the Snake River sockeye; the Snake River spring/summer Chinook; and, the Snake River fall Chinook. The essential features of the areas designated as critical habitat for these species are: 1) substrate (especially gravel for spawning); 2) water quality; 3) water quantity; 4) water temperature; 5) water velocity; 6) cover/shelter; 7) food; 8) riparian vegetation; 9) space; and 10) migration conditions. (58 FR 68543, published on December 28, 1993).

A proposed rule for the designation of critical habitat for UCR spring Chinook and steelhead, SR steelhead, MCR steelhead, UWR Chinook and steelhead, LCR Chinook and steelhead, and CR chum salmon was published on December 14, 2004 (69 FR 74572). The Corps is reviewing the proposed rule and, in accordance with the ESA and its implementing regulations, will respond as appropriate.

The Corps is continuing to implement the FCRPS operations addressed in the USFWS 2000 BiOp. Subsequent to the release of the USFWS 2000 BiOp, in September of 2001 the USFWS designated critical habitat for the Kootenai River white sturgeon (sturgeon). The Corps and BPA reinitiated consultation on the portion of the USFWS 2000 BiOp that addressed the effects of the operation of one of the Corps' FCRPS projects, Libby Dam, on the sturgeon's designated critical habitat. That supplemental consultation is also addressing additional new scientific information pertaining to the sturgeon and the effects of the Corps' operation of Libby Dam. Additionally, in September 2004, the USFWS issued its critical habitat designation for bull trout in the FCRPS action area. The Corps has requested reinitiation of consultation to address this recent designation, which includes the effects of the operation of the Corps' Albeni Falls project. The Corps believes the actions contained in the UPA are consistent with the implementation of the actions in the USFWS 2000 BiOp.

RECORD of CONSULTATION

NOAA Fisheries embarked on the court-ordered remand to address the court's ruling as to NOAA Fisheries' reliance on certain future actions, and to reconsider the jeopardy analysis for the FCRPS consistent with the consultation regulations. NOAA Fisheries and the Action Agencies agreed that the action analyzed for the new BiOp would primarily be based upon the RPA of the 2000 BiOp. Therefore the Action Agencies decided to prepare a UPA, which contains implementation of uncompleted and on-going actions that were in the 2000 RPA or as modified through the adaptive management process. To address the ESU specific survival needs, the UPA refines the RPA actions with an approach developed to address the life-stage needs of each ESU, and is based on adaptive

management principles including processes to assess and report progress and implementation planning. These changes were necessary to address ESA consultation regulations, recently available scientific data, and new information about specific operations, modifications, and non-hydro projects.

Several months into the remand, the states and Tribes proposed a collaborative process to discuss technical issues as well as the analytical framework for reaching determinations about jeopardy. In response, NOAA Fisheries participated in nineteen facilitated sessions with state and Tribal representatives and other interested parties during the winter and spring of 2004. Participants, including representatives from the Corps, discussed the following: intrinsic potential of habitat; hatcheries; hydro operations and actions, including effects, the estuary, and dam passage; population trends; and the analytical framework for ESA jeopardy determinations.

On September 8, 2004, NOAA Fisheries released a draft BiOp for review by states and Tribes. The Action Agencies also released a draft UPA. After issuing the draft BiOp, NOAA Fisheries staff met with state and Tribal technical and policy staff. The purpose of these meetings was to provide an overview and to answer questions, thus facilitating the review of the draft BiOp. Corps representatives participated in the meetings and provided information on the UPA.

Recent court opinions interpreting the ESA also necessitated further revisions from the NOAA Fisheries 2000 Opinion, such as the analysis of effects of the action on designated critical habitat. For these reasons, the consultation on the actions contained in the UPA and considered in the 2004 Biological Opinion supercede the previous ESA consultations on the effects of the operation of the FCRPS on the listed anadromous species.

During the course of this consultation, the Corps and the other Action Agencies discussed the NOAA Fisheries approach to the environmental baseline and critical habitat determinations. The following addresses the Corps understanding of the approach used by NOAA Fisheries in the 2004 BiOp.

The ESA requires a Federal agency to consult on actions that it proposes to authorize, fund, or carry out that are within its discretionary authority. In analyzing the effects of the proposed action, NOAA Fisheries must distinguish the effects of the proposed future operation of the FCRPS from its past construction and operation in accordance with ESA §7(a)(2) consultation regulations, which provide: "Section 7 and the requirements of this part apply to all actions in which there is discretionary involvement or control." Thus the effects of the existing project that are beyond the current discretion of the action agency are properly part of the effects of the environmental baseline. Those effects are part of the "no action" environment to which will be added the effects of the proposed action.

As noted above, Congress authorized the Corps to construct, operate, and maintain the FCRPS multi-use projects for flood control, navigation, power generation, fish and wildlife, recreation, water quality and supply, and irrigation. In its decision-making, given the discretion conferred by Congress, the Corps must rely on its professional judgment and technical expertise taking into account many factors and variables to meet this responsibility. For ESA Section 7 consultation purposes, the task is to analyze the

effects of the action that are within the Corps' discretion without compromising the obligation to provide for the congressionally authorized project purposes.

In the case of the operation of the FCRPS, when the proposed action is a continuation of a past action, the environmental baseline necessarily includes the effects of past actions within the action area, including those taken to construct and operate the ongoing project. The future existence of the dams is outside the Corps' discretion and thus is also included in the environmental baseline. NOAA Fisheries in its analysis of the UPA, attempted to determine what effects were attributable to the existence and past operation of the Corps FCRPS projects versus the proposed operations described in the UPA on the listed species and critical habitat. NOAA Fisheries also described the action area which, in accordance with the ESA implementing regulations is "all areas to be affected directly or indirectly by the Federal action and not merely the immediate area involved in the action." (50 CFR 402.02). The Corps acknowledges the action area NOAA Fisheries defined in the 2004 BiOp is different than the action area described in the UPA.

NOAA Fisheries, with the assistance of the Corps and the other Action Agencies, developed a surrogate for the hydro-operation component of the environmental baseline referred to as the "reference operation." In discussing how to define the "reference operation," the Corps was asked to delineate its discretionary operations for the 50-year hydrologic modeling analyses. The Corps concluded it was not possible to define all potential discretionary actions for 50 different hydrologic years for this modeling analysis due to the numerous variables and factors that require consideration when making operational decisions. As an example, real-time decisions for flood control operations require consideration of the amount of available flood control storage space, snow pack, near-term forecasts of precipitation, levee conditions, and other factors. The Corps and NOAA Fisheries therefore agreed, for the purpose of identifying a surrogate for the hydro-effects component of the environmental baseline, i.e. the "reference operation," certain operations necessary to provide for authorized project uses, such as flood control, would not be incorporated into this analysis. While this "reference operation" analysis does not reflect an operation the Corps has discretion to implement, as it is not consistent with the Corps' obligation to provide for the congressionally authorized project uses, it describes a mortality rate attributable to the existing configuration of the FCRPS that is a "conservative" estimate, i.e., one that is most protective of the species. Therefore, given this approach assigns a higher mortality to the proposed operation because it also includes mortality associated with the existence and non-discretionary operations of the projects, the Corps agrees this approach gives the benefit of the doubt to the listed species. Further, the Corps concludes that the actions in the UPA are not likely to jeopardize the continued existence of the listed species.

For determining whether the action causes an alteration of an essential habitat feature that is likely to result in the destruction or adverse modification of designated critical habitat, NOAA Fisheries used two alternative methods in the absence of a regulatory definition of this standard.[1] The first method, the Environmental Baseline Approach, uses as a point of reference the environmental baseline to which the effects of the action are added. If

[1] Application of the definition of "destruction or adverse modification is under consideration in light of the *Gifford Pinchot Task Force v. USFWS* No. 03-35279 (9th Cir. August 6, 2004).

NOAA Fisheries determines that the proposed action is likely to alter an essential feature of critical habitat compared to the condition under the environmental baseline, it then considers whether that alteration appreciably diminishes the value of critical habitat for survival or recovery.

As an alternative to this approach, NOAA Fisheries used the Listing Conditions Approach. To determine if the proposed action adversely alters an essential feature of critical habitat, NOAA Fisheries refers to the condition of the essential feature (also known as a "primary constituent element," or PCE), as it existed at the time the species was listed. If the action reduces the function of the essential feature below that which existed at the time of listing, NOAA Fisheries considers the essential feature to have been altered. As with the first alternative, if there is an alteration of an essential feature of critical habitat compared to this reference point, then NOAA Fisheries considers whether the alteration appreciably diminishes the value of critical habitat for survival or recovery. With either approach, the determination for the destruction or adverse modification of critical habitat is influenced by the status of the ESU and the degree to which conditions of the affected essential features meet the biological requirements of the species for survival or recovery. The Corps concludes that implementation of the actions contained in the UPA will not adversely modify the designated critical habitat.

The Corps also considered the effects of the actions in the UPA on other listed species addressed by the USFW in their 2000 BiOp and concluded there are no additional effects of the UPA on those species. The species includes Kootenai River white sturgeon, bull trout, bald eagles, grizzly bears, woodland caribou, Canada lynx, northern Idaho ground squirrel, gray wolves and four listed plant species.

The Corps has given full consideration to comments received on the draft UPA in preparing the Final UPA and this ROCASOD. The Action Agencies have prepared a document that summarizes our response to comments on the UPA.

SUMMARY of ACTION

The Corps intends to implement the hydrosystem, predator control and habitat actions described in the UPA and the Incidental Take Statement of the 2004 BiOp over the next ten years in an adaptive management framework. This framework utilizes performance goals based on NOAA Fisheries' analysis of expected juvenile and adult fish survivals through the hydrosystem and estimated benefits of non-hydro actions identified in the 2004 BiOp. It also provides the flexibility to adjust to actual conditions (e.g., runoff) and new information, and assures progress is being made to attain expected fish survival goals. In the case of adult performance goals, for instance, the 2004 BiOp included updated adult survival levels based on data from recent years, both before and after the 2000 biological opinion. For some ESUs, data were based on high adult survival from years considered to have optimum ocean and inriver migrating conditions. Therefore, because the level of adult survival is subject to variation, the performance goals, as displayed in the 2004 BiOp (Table 1 of Attachment 4 of Appendix D), reflect a range of anticipated survival. The mean and range of survival rates estimated in the most recent 3-5 year period for the comprehensive evaluations in 2007 and 2010 will be compared to the performance goals identified in the 2004 BiOp.

The adaptive management framework incorporates a pre-season analysis of expected actions and conditions as described in the Implementation Plans, the annual Water Management Plan, and the annual Progress Reports that document the actions taken and the results of monitoring. Annual planning will consider the previous years' performance to ensure adequate progress is being made.

The Corps will work with the other Action Agencies and within the NOAA Fisheries Regional Forum to conduct a comprehensive monitoring program to determine the effectiveness of actions taken to ensure performance goals are being met. Research, monitoring and evaluation will continue to improve our understanding of fish survival and effectiveness of hydrosystem operations, structural modifications, predator control activities, and habitat improvements. This information may be used to modify actions or identify new actions when necessary to meet performance standards.

The Corps, with the other Action Agencies, will prepare a comprehensive programmatic evaluation of progress in 2007 and again in 2010. These evaluations will report on system survival rates based on empirically derived in-river survival rates coupled with updated model analyses that include transport survival. This information will be compared to the performance goals identified in the 2004 BiOp. Based on this analysis, the Corps will determine if there should be changes to the existing plans or other actions should be taken to ensure that performance is achieved. If such course changes are deemed necessary in order to achieve expected performance, the Corps will coordinate with the other Action Agencies, NOAA Fisheries and regional interests prior to implementation.

As part of the adaptive management process, the Corps, with the other Action Agencies, will continue to coordinate FCRPS operations and facility improvements through the NOAA Fisheries Regional Forum. In 1995 NOAA Fisheries established the Regional Forum with the objective of ensuring the broad technical and policy input in planning, funding and implementing decisions concerning the operation and configuration of the FCRPS. Invited membership includes representatives from the states of Idaho, Montana, Oregon, and Washington, the Columbia Basin Tribes, and federal agencies. The Regional Forum currently is comprised of the Implementation Team (IT) and three technical teams – the Technical Management Team (TMT), the System Configuration Team (SCT), and the Water Quality Team (WQT). The IT provides guidance to the three other teams and is intended to resolve policy disputes. The TMT makes recommendations on in-season operations of the FCRPS projects. The SCT focuses on reviewing and prioritizing biological and facilities design studies as well as construction of structural modifications to the FCRPS projects. The WQT principally addresses total dissolved gas (TDG) and water temperature information related to the operation of the FCRPS projects. The Regional Forum also has access to an Independent Scientific Advisory Board (ISAB) co-sponsored by NOAA Fisheries and the Northwest Power and Conservation Council (Council).

The Corps also has established regional coordination teams, which include the Fish Facility Design and Review Workgroup, the Fish Passage O&M Coordination Team and Studies Review Workgroup. The Corps is committed to soliciting regional input through

these or other forums for the planning, design, construction, and operation of fish facilities as well as the research, monitoring and evaluation of such facilities.

FLOW MANAGEMENT

In operating the Corps' FCRPS projects for multiple authorized uses consistent with the ESA, the Corps intends to operate the FCRPS to provide mainstem flow augmentation as described in the UPA Table 3, page 48, and to improve system water quality. Achieving the flow objectives is not possible in all water years because there is limited water and reservoir storage available. The annual Water Management Plans prepared by the Corps and the other Action Agencies, in coordination with the region, strive to achieve the best possible mainstem passage conditions, recognizing the authorized project purposes and the limited water and storage resources available in the region. The Corps' in-season decisions during the migration and fish passage season are made after considering recommendations of the TMT. The TMT meets throughout the year to monitor, evaluate, and make recommendations on shaping of available water based on real time flow and biological information during the fish passage season, and to make recommendations on other system operational matters affecting fish such as spill and fish transportation. In coordination with NOAA Fisheries and USFWS, the Corps may adopt an alternative operation, including flood control operations, research, emergencies, navigation, or to meet other requirements or operations for other project uses. For instance, the TDG standard of 110% may be exceeded for flood control operations. Unless the Corps determines that alternative operations should be implemented, the Corps plans to operate the following projects as follows:

- **Dworshak.** Once the reservoir is evacuated to elevation 1520 in September, the Corps plans to maintain a minimum discharge, approximately 1.3 - 1.5 kcfs, from September through March to enhance the probability of being on the flood control rule curve by April. Higher discharges (up to 25 kcfs) may be released to stay on the flood control rule curve, for emergencies, to provide flows for listed chum below Bonneville Dam, or for other project uses. The Corps plans to operate Dworshak Reservoir to be no higher than a 1,558-foot maximum elevation on December 15 (winter flood control maximum elevation). The minimum discharge will be adjusted as needed in an attempt to avoid exceeding 110% TDG to the maximum extent possible. Between April and June, the Corps may draft the project if needed for flood control, refill by June 30, or provide spring flow augmentation as coordinated with TMT. Dworshak may be drafted as low as elevation 1520 in September to provide flow augmentation and temperature moderation in the lower Clearwater and Snake rivers, or to meet flow objectives at Lower Granite or McNary.

- **Libby.** The Corps plans to operate Libby Dam from January to March on minimum project releases to enhance the probability of being on upper rule curve by April 10 except for releases to meet flood control, International Joint Commission requirements at Kootenay Lake, for emergencies, or to provide flows for other project uses. The Corps will operate Libby utilizing the interim VARQ flood control criteria and a variable December 31 food control curve based on runoff forecasts. The Corps plans to operate Libby Dam in an attempt to provide the tiered sturgeon

volumes as requested by the USFWS consistent with existing treaties and laws; and, will reduce releases if monitoring identifies potential adverse effects of flooding, bank erosion, or TDG levels, and/or the Corps is requested by USFWS to reduce releases. Libby Dam will operate to meet or exceed bull trout minimum flow objectives in July and August. If Lake Koocanusa would be above elevation 2439 after providing flows for sturgeon and bull trout, the Corps may lower Libby Reservoir to elevation 2439 feet by August 31, or later in an attempt to meet salmon flow objectives in the Columbia River or be consistent with recommendations in the Northwest Power and Conservation Council mainstem Amendments if recommended by TMT.

- **Albeni Falls.** The Corps plans to operate Albeni Falls during fall and winter in an attempt to meet a 90 percent level of confidence of being at the April 15 flood control elevation while meeting the project and system minimum flow and flood control requirements. In accordance with the USFWS BiOp, the Corps intends to operate Albeni Falls so that the winter elevation of Lake Pend Oreille alternates between elevation 2051 and 2055 feet over the next several years as recommended by the USFWS and NOAA Fisheries. The purpose of this winter operation is to evaluate kokanee spawning and production, the utilization of kokanee by bull trout as a food source, and ultimately the survival of listed bull trout. Summer operation would be within the summer operating range above elevation 2062 at Lake Pend Oreille provided normal and planned conditions continue to exist within the Columbia Basin.

- **Chief Joseph.** The reservoir is maintained from elevation 950 to 956 year round. Daily fluctuations are generally limited to a one- or two-foot range to minimize bank sloughing below Grand Coulee Dam. The reservoir is not typically drawn down below 950 in order to protect nesting Canada geese and other wildlife populations, including bald eagles. The reservoir may be drawn down below 950 (to 930) in late summer and early fall for maintenance purposes.

- **Lower Snake River Projects.** The Corps plans to operate Lower Granite, Little Goose, Lower Monumental and Ice Harbor within a one-foot range above Minimum Operating Pool (MOP) from April 3 until adult fall Chinook salmon begin entering the lower Snake River as determined by the TMT. This is expected to occur by the end of August. Lower Granite would be filled after October 1 and all four lower Snake projects would be operated within their normal operating range for the remainder of the water year. In coordination with NOAA Fisheries and TMT, the Corps may operate at different elevations for research, flood control, navigation, other requirements or special operations.

- **Lower Columbia River Projects.** The Corps plans to operate Bonneville, The Dalles and McNary Reservoirs within their normal operating range. The Corps will operate John Day to as low as 257 feet for flood control if required for downstream protection. The Corps makes every attempt to operate John Day to assist irrigation; however, if needed for flood control, the Corps may change the operation in order to meet flood control requirements. From April 20 to September 30 each year, the Corps plans to operate John Day within a one-and-a-half foot range above elevation

262.5 feet, which should not significantly impact irrigation. Operation near elevation 262.5 feet at John Day will be maintained as long as possible without adversely affecting irrigators which means that the irrigation pumps will be able to withdraw water from the reservoir. The pool may be raised if irrigation pumping problems occur. During fall and winter, the Corps plans to operate all four lower Columbia River projects within their normal operating range.

SPILL

The Corps plans to provide the annual spill program for juvenile fish passage at Lower Granite, Little Goose, Lower Monumental, Ice Harbor, McNary, John Day, The Dalles and Bonneville projects identified in the UPA Table 4, page 50. This spill program involves voluntary spill to improve juvenile fish passage while avoiding high TDG supersaturation levels or adult fallback problems. Annual Water Management Plans will contain the work plans for the spill program and spill operations will be coordinated through the TMT. Annual spill volumes may be adjusted or interrupted due to emergencies, adult passage, navigation, research activities, flood control, other requirements and unanticipated events. The Corps will continue to coordinate with the States of Oregon and Washington on voluntary spill for fish passage. Future spill operations may be considered for modification through the implementation planning process and adaptive management. The Corps will continue to evaluate and optimize spill passage survival to meet the hydro-system performance goals.

JUVENILE FISH TRANSPORTATION PROGRAM

The Corps will continue to collect and transport juvenile salmonids at the three lower Snake River hydrosystem projects with collector facilities (Lower Granite, Little Goose, and Lower Monumental), and at McNary Dam in accordance with the extant ESA Section 10 Permit. The start date for transport is modified as follows. In years when the seasonal average Snake River flow at Lower Granite is expected to be less than 70 kcfs, fish transportation will be maximized from the date the juvenile bypass systems begin operation and spill will not occur at collector projects. Spill will be provided at the collector projects through April 20 and collection for transport will be initiated April 20 in all years where average seasonal flows are expected to equal or exceed 70 kcfs. Prior to April 20, all collected fish will be bypassed back to the river.

Transport will continue in accordance with the Juvenile Fish Transportation Plan described in the Fish Passage Plan, which will be prepared annually. Summer barging will be continued through August 15.

The Corps and BPA will continue to conduct RM&E to provide information on juvenile fish transportation and delayed mortality. Continued research and monitoring will provide information to develop a long-term transport program to benefit summer migrating species. The Corps is planning research to examine the effect of transport on juvenile fall Chinook. Baseline research on existing conditions is planned for 2005-2007 with a comprehensive evaluation of transportation versus in-river migration to follow. This study will require an initial determination of related life history attributes influencing transportation success and passage timing through the FCRPS. Future

operations will be adaptively managed with consideration of in-season fish migration conditions and research results and the transportation strategy that best contributes to achievement of the total system survival performance standard.

FUTURE STUDIES OF OPERATION AND CONFIGURATION MODIFICATIONS

The Corps will continue to evaluate, design and implement operational and configuration modifications at Corps' dams to improve fish passage survival and to meet performance goals, in coordination with the region.

Structural modifications and improvements, primarily through the Columbia River Fish Mitigation project (CRFM), will focus on surface oriented passage for juveniles, such as Removable Spillway Weirs (RSWs) and the Bonneville Second Powerhouse corner collector. The Corps will continue to work through the SCT, the IT, and other regional forums such as the Corps' Fish Facility Design and Review Workgroup on implementing these studies and other system improvements subject to congressional appropriations. The Corps' RM&E program will continue to improve our understanding of the impacts of the hydrosystem to inform future actions and will help to verify performance goals are being met.

Improvements to increase adult salmon returns through the juvenile fish transportation program are being evaluated. These improvements include additional barges, a new juvenile fish facility at Lower Granite and improvements to the juvenile fish facilities at Little Goose, Lower Monumental and McNary Dams.

The UPA identifies several studies of the operation of the FCRPS to address improvements for listed species. The Corps is committed to pursue funding to conduct these studies. The exact scope and schedule of each study will be dependent upon congressional appropriations, public input, compliance with applicable laws and regulations and other procedural requirements.

AVIAN PREDATION

The Corps will participate in Caspian tern management actions to effect redistribution of terns from the Columbia River estuary in order to reduce predation of juvenile salmonids. These actions will be done in a manner consistent with the selected alternative in a Record of Decision (ROD) after completion of the Environmental Impact Statement (EIS) on Caspian tern management. The USFWS is the lead agency and the Corps and NOAA Fisheries are cooperating agencies. In the draft EIS, a preferred alternative was identified that relies on habitat management and social attraction at alternate nesting locations in the Columbia River Basin and other west coast locations to reduce the size of the tern colony in the Columbia River estuary. In conjunction with this increase of suitable habitat outside of the Columbia River Basin, the available habitat at East Sand Island would be reduced from 6 acres to 1 to 1-1/2 acres. Under this scenario, the Caspian tern colony in the Columbia River estuary would be reduced from an average current population of 9,085 nesting pairs to 2,500 – 3,125 nesting pairs; paring predation by approximately 4 million juvenile salmonids annually.

The Final EIS on Caspian Tern Management to Reduce Predation of Juvenile Salmonids in the Columbia River estuary is scheduled for completion in February 2005, with RODs issued by appropriate agencies by February 28, 2005. The Corps, in coordination with the other agencies, will complete an implementation plan for the selected alternative subsequent to the RODs and by spring 2005. Implementation of the preferred alternative identified in the current draft EIS involves redistribution of the estuary tern colony that could begin in 2005 and could begin producing results in 2006, contingent on obtaining appropriate authorities and funding.

The Corps does not anticipate any additional adverse impacts to listed salmonids in the Columbia River estuary from the actions taken to maintain or decrease the available Caspian tern nesting habitat at East Sand Island and therefore is not planning any further consultation with NOAA Fisheries to authorize additional incidental take. The Corps, in concert with NOAA Fisheries and the USFWS, will make an assessment of potential effects at other locations on listed species and consult as appropriate with NOAA Fisheries or USFWS.

The Corps and BPA will continue to fund research in the Columbia River estuary that began in 1997 to assess the impacts of avian predators on the survival of juvenile salmonids. Through this program and data from recovered PIT-tags, researchers have collected baseline information on the annual colony size and level of reproductive success of Caspian terns nesting on East Sand Island as well as baseline information on diet composition and annual consumption of juvenile salmonids and other prey species. As the agencies implement the proposed Caspian tern management action, the RM&E program will continue in order to determine the effects of tern redistribution on colony size, annual level of reproductive success, and annual consumption levels of juvenile salmonids by Caspian terns remaining on East Sand Island. This will enable the action agencies to validate the assumption that there is a linear relationship between the number of terns nesting on East Sand Island and the number of juveniles salmonids consumed. In addition, the Action Agencies will continue and expand research efforts to evaluate whether or not other avian predators nesting on East Sand Island are compensating for the decrease in juvenile salmonid consumption by the redistribution of Caspian terns. Both gulls and cormorants nest on East Sand Island; however, past research indicates that the level of gull predation on juvenile salmonids is minimal. Therefore, research will continue to focus on the double-crested cormorant colony in the estuary.

The Corps, in concert with other appropriate Federal agencies, will continue and expand research efforts to understand the impacts of predation on juvenile salmon and steelhead by double crested cormorants in the Columbia River estuary. Research efforts on double-crested cormorants will be also directed at development and future implementation of management actions to develop alternative habitat elsewhere within the range of this cormorant population. The objective will be to facilitate a future reduction and redistribution of the Columbia River estuary population of double-crested cormorants, thereby reducing their predation on juvenile salmonids. Research and management actions will be directed at the Caspian tern colony at Crescent Island in Lake Wallula behind McNary Dam to reduce their predation on juvenile salmonids. Management

opportunities will be considered in coordination with the region based on the results of these research efforts.

ESTUARY HABITAT

The Corps will continue to work with BPA and local interests on the program to protect, restore and enhance habitat for salmon and steelhead in the Columbia River estuary. Six estuary projects targeted at providing shallow water and wetland habitat for Snake River fall Chinook are identified for implementation in the UPA and will be completed over the next few years, with the last scheduled for completion by 2010. These projects are Crims Island, Sandy River, Germany Creek, Grays River, Fort Columbia Wetlands and Chinook River restoration. While these projects are targeted at habitat requirements for Snake River fall Chinook, they will provide benefits to all listed ESUs, especially those with an ocean-type life history.

Consultations with NOAA Fisheries on the effects of actions at Crims Island and parts of Sandy River have been completed. The Corps will assess the effects of any additional habitat actions it undertakes on all listed species. If it is determined there are short-term adverse effects on the 13 ESU addressed in the 2004 BiOp, the Corps will consult with NOAA Fisheries to supplement the 2004 BiOp to authorize additional incidental take. As appropriate, the Corps will consult on other listed species at other locations.

The Corps will also continue its portion of with the Estuary RM&E program, utilizing the Action Agencies' *Plan for Research, Monitoring, and Evaluation of Salmon in the Columbia River Estuary* (Final Draft prepared in July 2004). This RM&E program will allow the Action Agencies to improve our understanding and verify the benefits of habitat improvements for different salmon and steelhead ESUs. As information is obtained through the estuary studies, the Corps and the other Action Agencies will be better able to target and implement actions that will contribute to avoiding the likelihood of jeopardizing the continued existence of the listed species, (establish amount and types of habitat) and provide more specificity and clarity on the biological benefits of these actions. The objective is to implement actions that provide the greatest biological benefit to listed ESUs.

INCIDENTAL TAKE STATEMENT

The Corps has considered the terms and conditions of the Incidental Take Statement (ITS) and intends to implement all terms and conditions and will coordinate these measures through the Regional Forum.

In the ITS, NOAA Fisheries states that the proposed non-hydro activities, which include avian predation management in the estuary and estuary habitat restoration projects, are expected to have net beneficial effects. NOAA Fisheries did not anticipate short-term adverse effects from these non-hydro actions at this time and therefore did not authorize incidental take associated with the non-hydro actions. If the Corps determines that there are short-term adverse effects in implementing these non-hydro actions, we will coordinate with NOAA and may seek to supplement the 2004 BiOp to authorize incidental take for these actions.

An ITS for other listed species or at other locations would be included in separate ESA consultations for those components. For instance, proposed Caspian tern redistribution locations that are outside of the Columbia River basin would require separate consultations and ITS.

CONSIDERATIONS AFFECTING DECISIONS and IMPLEMENTATION

The following factors are considerations, in addition to the adaptive management framework, that the Corps will examine in implementing the actions in the 2004 BiOp. These factors may affect the schedule and scope of the proposed actions, and operational decisions on flows, spill and juvenile fish transportation.

AUTHORITIES

If potential actions in the hydrosystem, avian predation, and habitat sectors require additional congressional authority and/or direction, the Corps, will examine the appropriate course of action on a case by case basis. This may include preparation of authorizing documents, requests for appropriations, notification to congressional committees, preparation of NEPA documents or other actions.

EMERGENCIES

Unforeseen project emergencies, drought, power reliability, floods or other natural disasters can occur and may require modifications in operations at Corps' projects. Operational measures, including spill, flow objectives, reservoir fill or draft goals, and other actions, may be curtailed if necessary to maintain power system reliability, sufficiency, or for other emergencies, including providing for flood control or navigation. Protocols to address emergency situations have been developed and are intended to provide guidance to the TMT to determine the potential impact to listed fish resulting from the modification. The Corps would consider the effects identified through this process in making final decisions on adopting operations that differ from those discussed in this ROCASOD.

TRIBAL TREATY and TRUST RESPONSIBILITIES

The United States government recognizes the sovereign status of Native American Tribes. Treaties between the U.S. and some Columbia Basin Tribes document agreements reached between the federal government and the Tribes. In exchange for ceding most of their ancestral land, the government established reservation lands and guaranteed that the government would respect the treaty rights - including fishing and hunting rights. The treaties provide, in part, the exclusive right of taking fish in the streams running through and bordering the reservations and at all other usual and accustomed stations in common with citizens of the U.S. The federal government has a trust responsibility to protect the tribal rights under these treaties.

The government's trust responsibility is an obligation under which federal officials consult with Tribes on management and use of resources, such as preserving and maintaining the trust asset. In carrying out its fiduciary duty, it is the Corps' responsibility to ensure that Indian treaty rights are given full effect.

Presidential executive orders were used to reserve lands for other Columbia River Basin Tribes, and the federal government has extended rights to hunt and fish to the executive order Tribes as well.

The Corps will comply with the Executive Order on Consultation and Coordination with Indian Tribal Governments. In formulating and implementing activities that have Tribal implications, the Corps will consult with the affected Tribes.

COLUMBIA RIVER TREATY

The Corps, a member of the U.S. Entity along with BPA, and others coordinate the planning and operation of the FCRPS with Canada through a variety of arrangements. Examples include development of assured operating plans and detailed operating plans under the Columbia River Treaty, and arrangements with Canada for mutually beneficial non-power uses agreements. To the extent possible, the Corps utilizes these mechanisms to coordinate operations identified in BiOps. However, in agreeing to implement the 2004 BiOp, the Corps is not relying on specific operations of projects in Canada.

ENVIRONMENTAL COMPLIANCE

When implementing the hydrosystem, avian predation and habitat actions and the terms and conditions of the Incidental Take Statement described in the 2004 BiOp, the Corps reviews its compliance with all applicable laws.

- **National Environmental Policy Act (NEPA)**

The Corps has evaluated the effects of actions to be implemented utilizing past NEPA documents. These NEPA documents include prior project and system Environmental Impact Statements (EIS). The last two EISs on operational alternatives are the System Operation Review EIS (SOR EIS) completed with the issuance of a Record of Decision (ROD) in 1997 and the Lower Snake River Juvenile Salmon Migration Feasibility Report/EIS (Lower Snake EIS) completed with the issuance of a ROD in September 2002. The Corps has reviewed the biological requirements of the listed species and the operations described in this ROCASOD. The Corps believes that the effects are within the range of the analysis conducted in the SOR EIS, Lower Snake EIS, prior project EISs and earlier system EISs. These effects include improved survival of listed salmonids, bull trout and white sturgeon; reduction in hydropower generation; decrease in recreational opportunities; resident fish and wildlife impacts; effects on TDG levels and water temperatures; and additional exposure of cultural resources at certain projects. Except for studies of certain future operations and structural modifications of the projects, the Corps has determined that the effects of the operations to be within the analysis contained in the existing NEPA documentation. For other actions, such as future habitat actions and

elements of the strategy to reduce avian predation, the Corps will rely on separate NEPA analysis.

- **Federal Water Pollution Control Act (Clean Water Act)**

In developing the UPA, the Corps considered respective ecological objectives of the ESA and the CWA. In many instances, actions implemented for the conservation of ESA listed species will also move toward attainment of water quality standards (e.g. reducing TDG and temperature).

Actions implemented for the conservation of ESA listed species, in certain instances, may exceed the states' and Tribal water quality standards. For instance, the UPA includes voluntary spill for fish passage to 120% TDG at the four lower Snake River projects, located in Washington, and the four lower Columbia River projects, located in Oregon and Washington. Both Oregon and Washington's water quality standard for TDG is 110%. The Corps will continue to seek to harmonize operations to comply with both the ESA and the applicable state water quality standards. In order to provide for voluntary spill levels for fish passage, which result in exceedances of existing states' TDG standards, the Corps coordinates with Oregon and Washington on a multi-year basis to accomplish both the ESA objectives for survival and recovery of listed species, and the TDG water quality goals of the CWA. The Oregon Environmental Quality Commission issued a multi-year variance for fish passage spill through 2007 and the Corps is coordinating with the Washington Department of Ecology on approving a gas abatement plan through 2007. The Corps will also explore all practicable steps, subject to congressional appropriations and directives, to lower and eliminate, if practicable, any resulting exceedances of TDG should states' and Tribal variances not be granted.

The UPA identifies spill up to the State of Idaho's TDG standard of 110% from the Corps' Dworshak project, located in Idaho, to augment flows for fish and to moderate water temperatures downstream.

As noted above, the operation of Libby Dam is currently undergoing reinitiation of consultation with the USFWS on effects of operations on listed sturgeon and designated critical habit. The Corps will coordinate with the State of Montana if the consultation results in recommending a test or operation for purposes of increasing flows for listed sturgeon that would exceed Montana's water quality standard for TDG of 110%.

The UPA also includes installation of flow deflectors at Chief Joseph to shift system involuntary spill from other projects to Chief Joseph, located in Washington. Once completed, the Corps will coordinate with the State of Washington and the regional water quality team on the recommended involuntary spill operations.

The Corps completed a comprehensive Water Quality Plan for Total Dissolved Gas and Water Temperature in the Mainstem Columbia and Snake Rivers in December 2003 (WQP). This WQP plan was prepared in response to the commitment to develop a plan recommended in Appendix B of the NMFS 2000 BiOp for the mainstem Columbia and Snake rivers to address CWA objectives. The geographic scope of the WQP goes beyond that of the FCRPS. It includes additional actions to improve mainstem water quality by

reducing TDG and temperature that must be undertaken by entities other than the Action Agencies. Subject to available funds and congressional directives, the Corps is committed to working with the Action Agencies and others to update and implement the WQP and take all practicable steps to move closer to CWA standards. The Corps intends to periodically update the WQP, next planned for 2007, working through an adaptive management process and the regional Water Quality Team to accomplish the following:

- Define and evaluate specific TDG and temperature water quality problems associated with the operation of the hydrosystem, and develop a plan of action to solve or reduce these problems.

- Consider operational and capital investment recommendations at the Federal projects to reduce levels of TDG while maintaining or improving fish passage survival.

- Implement and report on adequate physical, biological, and chemical (with a priority on TDG and temperature) monitoring.

- Implement modeling as part of meeting responsibilities under the ESA and the CWA to better assess and act on water quality issues for TDG and water temperature.

The Corps believes a critical component to the achievement of water quality standards is the establishment of clear, implementable TMDLs for all users of the Columbia River and Snake River system who contribute to the non-attainment of those limits. The Corps is working with the Environmental Protection Agency (EPA) and the states on their Total Maximum Daily Load (TMDL) processes. The Corps will also work with Tribal governments for this purpose. The states have established TMDLs for TDG for the Lower Columbia River, the Lower Snake River and the Mid-Columbia River reaches. The Corps provided information on TDG and actions being taken to reduce reliance on voluntary fish passage spill up to 120% at its dam and reservoir projects in order to assist the states, Tribes, and EPA in their TMDL process. The Corps is committed to continue assisting the states and EPA in the development of the Columbia and Snake River TMDL for water temperature. As the states and EPA develop additional information, including TMDLs for the Columbia River Basin, the Corps will determine what actions it may take consistent with those water quality parameters, authorized project purposes, and congressional appropriations and directives.

- **Endangered Species Act (ESA)**

There may be individual actions in the UPA that require additional consultation. For instance, the effects of habitat actions in the estuary will be assessed, and if there are adverse short-term effects to the 13 ESUs addressed in the 2004 BiOp, the Corps will consult with NOAA Fisheries to supplement the 2004 BiOp to authorize additional incidental take. There may be other activities, which may have effects on other listed species or at other locations, in those cases, the Corps will make an assessment of effects and consult as appropriate.

Section 4(f) of the ESA directs NOAA Fisheries to develop and implement recovery plans for the ESUs addressed in this Opinion. The Corps agrees with NOAA Fisheries that recovery plans will have a greater likelihood of success if developed in partnership with other stakeholders, including those that have the responsibility and authority to implement recovery actions. Current efforts that will provide a strong foundation for ESA recovery plans in the Columbia River Basin include the Northwest Power and Conservation Council's subbasin plans and the State of Washington's regional recovery plans. The Corps intends to work with NOAA Fisheries and the other Action Agencies to assist in the Council's subbasin planning and State of Washington recovery planning groups as they develop assessments, strategies, and actions.

- **Magnuson Fishery Conservation and Management Act**

The Magnuson-Stevens Fishery Conservation and Management Act (MSA), as amended by the Sustainable Fisheries Act of 1996 (Public Law 104-267), established procedures designed to identify, conserve, and enhance essential fish habitat (EFH) for those species regulated under a Federal fisheries management plan.

NOAA Fisheries concluded that the UPA would adversely affect EFH for Columbia Basin Chinook and coho salmon, English sole, starry flounder, the northern anchovy, and the Pacific sardine. Pursuant to the § 305(b)(4)(A) of the MSA, NOAA Fisheries is required to provide EFH conservation recommendations to Federal agencies, including itself, regarding actions that would adversely affect EFH. NOAA Fisheries concluded that the applicable conservation measures described in the UPA, dated November 24, 2004, and the terms and conditions outlined in Section 10 of the 2004 BiOp, are generally applicable to designated EFH for Chinook and coho salmon, English sole, starry flounder, northern anchovy, and Pacific sardine and together, address these adverse effects to the extent practicable. Consequently, NOAA Fisheries recommended that both the UPA and the terms and conditions in Section 10 of the 2004 BiOp be adopted as EFH conservation measures.

Pursuant to the MSA (§ 305(b)(4)(B)) and 50 C.F.R. § 600.920(j), in issuing this ROCASOD, the Corps is providing NOAA Fisheries of their intent to implement the EFH conservation recommendations.

- **Pacific Northwest Electric Power Planning and Conservation Act**

Under the Pacific Northwest Electric Power Planning and Conservation Act (Northwest Power Act), the Corps is required to exercise its responsibilities for operating the FCRPS in a manner that provides equitable treatment for fish and wildlife with other purposes for which the Corps' facilities are operated and managed, and to take into consideration in its decision making the Council's Fish and Wildlife Program to the fullest extent practicable. The Corps has considered the Council's Amendments to their Fish and Wildlife Program in making decisions on the operation of the FCRPS adopted in this ROCASOD and will take these Amendments into consideration on future actions. The Corps recognizes that some recommendations in the Amendments were not incorporated into the UPA, but through adaptive management as described in the UPA, there is a process to consider future changes. Further, the Corps believes the actions adopted by this ROCASOD

provide for the equitable treatment of fish and wildlife with the other purposes for which the Corps' facilities are operated and managed.

- **Others**

There are other laws and regulations that the Corps is responsible to consider in making decisions on the actions. Such laws and regulations include:

Archaeological Resources Protection Act
National Historic Preservation Act
Native American Graves Protection and Repatriation Act
Clean Air Act
Fish and Wildlife Coordination Act
Migratory Bird Treaty Act
Coastal Zone Management Act
Safe Water Drinking Water Act
Flood Control Act of 1944
Wild and Scenic Rivers Act
Oil Pollution Act
Marine Protection, Research, and Sanctuaries Act
River and Harbors Acts
Executive Orders and CEQ Guidelines and Memorandum
Other Federal, State and Local Plans and Laws

Since this ROCASOD addresses 2004 and future years, the Corps does not anticipate issuing RODs on an annual basis to address specific operations. The Corps will consider the available information on the effects of different operations.

FUNDING/APPROPRIATIONS

The Corps' programs are funded by congressional appropriations. The Corps also receives funding from BPA on certain powerhouse features or operation and maintenance actions related to hydropower generation. The Corps will review the actions in the UPA and BiOps within the annual budgetary guidance. If the funds appropriated are less than anticipated, the Corps will work with the Services and other federal and state agencies and tribes to prioritize the work for that fiscal year.

STATEMENT of DECISION

I have taken into consideration the environmental consequences, the economic costs and the biological data supporting the hydrosystem operations and project improvements, avian predation, and habitat actions discussed in the UPA and this ROCASOD. The Corps has determined that adequate authority, NEPA documentation, and biological rationale exist to implement hydrosystem operations and investigate future hydrosystem operations and project improvements, avian predation actions, and habitat improvements.

I have taken into account the effect of the operations described in the UPA and consistency with state and Tribal water quality standards, and have determined that the

actions set forth in this ROCASOD are consistent with the Corps' legal obligations under the CWA.

In making this decision, I have given consideration to my treaty and trust responsibilities as a representative of the U.S. government. I understand my obligation to ensure the treaty rights are protected and to act in a manner consistent with the trust responsibility. I have taken into account the Northwest Treaty Tribes' fishing rights, the United States' trust responsibility to Indian Tribes, and its responsibility to act in a manner consistent with the trust responsibility. The actions that the Corps will implement are designed to lead to increased survival and recovery of the listed salmon species and other stocks with beneficial results to the Treaty Tribes' fishery and benefits to the Northwest Region as a whole. Although there is scientific disagreement, the conclusions in the 2004 BiOp take into account the differing scientific opinions and interpretations of available information. The Corps' decision to rely on the biological information contained in the 2004 BiOp is based, in part, on NOAA Fisheries consideration of differing scientific/biological information and their expertise on the effects on other species of interest to Northwest Tribes.

I find that the determinations made in this ROCASOD are sufficient for the Corps to adequately implement the UPA and the Incidental Take Statement in the 2004 BiOp. These coordinated actions are a combination of system operations, configuration improvements, avian predation reduction actions, habitat restoration and continued monitoring activities. The Corps has determined that these actions, taken together, will meet the Corps' responsibilities under the ESA to insure the actions carried out are not likely to jeopardize the continued existence of twelve listed and one proposed anadromous species (Snake River spring/summer Chinook, fall Chinook and sockeye salmon; upper Columbia River spring Chinook; Snake River, lower Columbia, middle Columbia, upper Columbia River, and upper Willamette River steelhead; lower Columbia chum salmon; lower Columbia Chinook salmon; and upper Willamette River Chinook salmon, lower Columbia River coho); and will not adversely modify the critical habitat designated for three ESUs.

Issued in Portland, Oregon on January 3, 2005.

William T. Grisoli
Brigadier General, U.S. Army
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Appendix A
List of Project Uses and Authorizing Laws

PROJECT NAME:	OPERATING PURPOSES/USES:	AUTHORIZED PURPOSES/USES:	AUTHORIZING LAWS:
ALBENI FALLS DAM Pend Oreille River Bonner County, ID	Recreation Navigation Hydroelectric Power Flood Control Fish/Wildlife	Recreation Navigation Hydroelectric Power Flood Control Fish/Wildlife	PL 78-534 PL 81-516 PL 81-516 PL 81-516 PL 85-624, PL 96-501
BONNEVILLE LOCK AND DAM Columbia River, Multnomah County, OR Skamania County, WA	Hydroelectric Power Recreation Navigation Water Quality Fish/Wildlife	Hydroelectric power Recreation Navigation Water Quality Fish/Wildlife	PL 75-329 PL 78-329 PL 75-329 PL 92-500 PL 85-624, PL 98-396, PL-96-501
CHIEF JOSEPH DAM – RUFUS WOODS LAKE Columbia River., Douglas and Okanogan Counties, WA	Hydroelectric Power Recreation Fish/Wildlife Addt'l units authorized by PL 94-587 & PL 95-26	Hydroelectric Power Recreation Fish/Wildlife	PL 79-525 PL 78-534 PL 85-624, PL 96-501
THE DALLES LOCK AND DAM – LAKE CELILO Columbia River, Wasco County, OR and Klickitat County, WA	Irrigation Navigation Recreation Fish/Wildlife Water Quality Hydroelectric Power	Irrigation Navigation Recreation Fish/Wildlife Water Quality Hydroelectric Power	PL 81-516 PL 81-516 PL 78-534 PL 85-624, PL 98-396, PL 96-501 PL 81-516, PL 92-500 PL 81-516
DWORSHAK DAM AND RESERVOIR North Fork of the Clearwater River. Clearwater County, ID	Fish/Wildlife Hydroelectric Power Navigation Recreation Flood Control	Fish/Wildlife Hydroelectric Power Navigation Recreation Flood Control	PL 87-874, PL 85-624, PL 96-501 PL 87-874 PL 87-874 PL 78-534 PL 85-500, PL 87-874
ICE HARBOR LOCK AND DAM – LAKE SACAJAWEA Snake River. Walla Walla and Franklin Counties, WA	Navigation Irrigation Recreation Hydroelectric Power Fish/Wildlife	Navigation Irrigation Recreation Hydroelectric Power Fish/Wildlife	PL 79-14 PL 79-14 PL 78-534 PL 79-14 PL 85-624, PL 96-501
JOHN DAY LOCK AND DAM – LAKE UMATILLA Columbia River. Sherman County, OR. Klickitat County, WA.	Flood Control Irrigation Navigation Recreation Fish/Wildlife Water Quality Hydroelectric Power	Flood Control Irrigation Navigation Recreation Fish/Wildlife Water Quality Hydroelectric Power	PL 81-516 PL 81-516 PL 81-516 PL 78-534 PL 81-516, PL 96-501 PL 81-516, PL 92-500 PL 81-516
LIBBY DAM – LAKE KOOCANUSA Kootenai River. Lincoln County, MT	Recreation Hydroelectric Power Flood Control Fish/Wildlife	Recreation Hydroelectric Power Flood Control Fish/Wildlife	PL 78-534 PL 81-516 PL 81-516 PL 85-624, PL 96-501
LITTLE GOOSE LOCK AND DAM – LAKE BRYAN Snake River. Whitman and Columbia Counties, WA	Fish/Wildlife Irrigation Navigation Hydroelectric Power Recreation	Fish/Wildlife Irrigation Navigation Hydroelectric Power Recreation	PL 85-624, PL 96-501 PL 79-14 PL 79-14 PL 79-14 PL 78-534
LOWER GRANITE LOCK AND DAM Snake River. Whitman and Garfield Counties, WA	Navigation Hydroelectric Power Recreation Fish/Wildlife Irrigation	Navigation Hydroelectric Power Recreation Fish/Wildlife Irrigation	PL 79-14 PL 79-14 PL 78-534 PL 85-624, PL 96-501 PL 79-14
LOWER MONUMENTAL LOCK AND DAM Snake River. Walla Walla and Franklin Counties, WA	Navigation Hydroelectric Power Recreation Fish/Wildlife Irrigation	Navigation Hydroelectric Power Recreation Fish/Wildlife Irrigation	PL 79-14 PL 79-14 PL 78-534 PL 85-624, PL 96-501 PL 79-14
MCNARY LOCK AND DAM LAKE WALLULA Columbia River. Umatilla County OR Benton County WA	Hydroelectric Power Navigation Irrigation Recreation Fish/Wildlife	Hydroelectric Power Navigation Irrigation Recreation Fish/Wildlife	PL 79-14, PL 99-662 PL 79-14 PL 79-14 PL 78-534 PL 85-624